moiety, provided that when B is a purine or pyrimidine, it is attached at the N^9 -position of the purine or deazapurine or deazapurine, and when B is pyrimidine, it is attached at the $N^{1'}$ position;

wherein A represents a component of a detectable complex and comprises at least three carbon atoms;

wherein B and A are attached together directly or through a linkage group said linkage group not interfering substantially with the characteristic ability of A to form said detectable complex;

wherein if B is a purine, the linkage is attached to the 8
-position of the purine, if B is a deazapurine, the linkage
is attached to the 7 -position of the deazapurine, and B is a
pyrmidine, the linkage is attached to the 5 -position of the
pyrimidine; and

wherein each of x,y and z represents:

and which composition further comprises at least one additional component including a polypeptide capable of directly or indirectly forming said complex with A [said compound].

- 102. (amended) A [chemical complex] composition in accordance with claim 101 wherein said poylpeptide includes a moiety which can be detected.
- in accordance with claim 102 wherein said detectable moiety is a fluorescent dye, [eletron] electron dense protein, or enzyme capable of [depositing an insoluble] producing a detectable reaction product.

110. (amended) A [chemical complex] composition comprising a compound [in accodance with Claim 47] having the structure:

wherein each of B, B', and B'' represents a purine, deazapurine, or pyrimidine moiety covalently bonded to the C¹'
-position of the sugar moiety, provided that whenever B, B'
or B'' is purine or deazapurine, it is attached at the N⁹
-position of the purine or deazapurine, and whenever B, B'
or B'' is a pyrimidine, it is attached at the N¹ -position;
wherein A represents a component of a detectable complex and
comprises at least three carbon atoms;

wherein B and A are attached together directly or through a linkage group, said linkage group not interfering substantially with the characteristic ability of A to form said detectable complex;

wherein if B is purine, the linkage is attached to the 8position of the purine, if B is deazapurine, the linkage is
attached to the 7-position of the deazapurine, and if B is a